

COMPRESSOR DEFINITION

Designation	F GS60HAW
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513200466

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 255 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5.56	[cm ³] (0.339 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10.7	[kg] (23.59 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA5B3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(330)	[µF(VAC minimum)]
5 Motor protection	4TM189NFBYY-53	
6 Start winding resistance	13.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	5.30/4.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	0.95/0.75	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IRAM	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
500	126	147	103	0.49	2.84	4.88	1.23	1.43

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
588	148	172	120	0.70	3.34	4.90	1.23	1.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	252	63	74	71	0.36	1.42	3.55	0.89	1.04
-30	(-22)	367	92	108	84	0.41	2.08	4.41	1.11	1.29
-25	(-13)	509	128	149	97	0.47	2.89	5.27	1.33	1.54
-20	(- 4)	680	171	199	110	0.53	3.87	6.15	1.55	1.80
-15	(+ 5)	881	222	258	123	0.59	5.03	7.10	1.79	2.08
-10	(+14)	1116	281	327	136	0.65	6.40	8.15	2.05	2.39

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	182	46	53	66	0.34	1.03	2.74	0.69	0.80
-30	(-22)	305	77	89	81	0.40	1.73	3.81	0.96	1.12
-25	(-13)	452	114	132	97	0.47	2.56	4.74	1.20	1.39
-20	(- 4)	623	157	183	113	0.54	3.55	5.59	1.41	1.64
-15	(+ 5)	822	207	241	129	0.62	4.69	6.39	1.61	1.87
-10	(+14)	1050	265	308	146	0.70	6.01	7.18	1.81	2.10

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	64	16	19	54	0.29	0.36	1.16	0.29	0.34	
-30 (-22)	200	51	59	73	0.37	1.14	2.62	0.66	0.77	
-25 (-13)	357	90	104	91	0.45	2.02	3.82	0.96	1.12	
-20 (- 4)	534	135	156	111	0.54	3.04	4.83	1.22	1.41	
-15 (+ 5)	735	185	215	131	0.63	4.19	5.66	1.43	1.66	
-10 (+14)	962	242	282	152	0.73	5.51	6.37	1.60	1.87	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	311	78	91	82	0.39	1.76	3.80	0.96	1.11	
-30 (-22)	442	111	130	98	0.46	2.51	4.55	1.15	1.33	
-25 (-13)	602	152	176	114	0.53	3.42	5.31	1.34	1.56	
-20 (- 4)	798	201	234	130	0.60	4.54	6.10	1.54	1.79	
-15 (+ 5)	1040	262	305	147	0.68	5.94	6.96	1.75	2.04	
-10 (+14)	1337	337	392	166	0.77	7.66	7.93	2.00	2.32	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	226	57	66	75	0.36	1.28	2.98	0.75	0.87	
-30 (-22)	370	93	108	94	0.44	2.10	3.96	1.00	1.16	
-25 (-13)	534	134	156	112	0.52	3.03	4.82	1.21	1.41	
-20 (- 4)	726	183	213	131	0.61	4.13	5.59	1.41	1.64	
-15 (+ 5)	955	241	280	152	0.70	5.45	6.31	1.59	1.85	
-10 (+14)	1230	310	360	174	0.81	7.05	7.01	1.77	2.05	

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	95	24	28	64	0.32	0.54	1.48	0.37	0.43	
-30 (-22)	260	66	76	86	0.41	1.48	2.85	0.72	0.84	
-25 (-13)	437	110	128	107	0.50	2.48	3.98	1.00	1.17	
-20 (- 4)	633	159	185	130	0.60	3.60	4.89	1.23	1.43	
-15 (+ 5)	857	216	251	154	0.71	4.89	5.63	1.42	1.65	
-10 (+14)	1119	282	328	181	0.84	6.41	6.22	1.57	1.82	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	6.5 +0.09/-0.09	[mm]	(0.256" +0.004"/-0.004")
3.5 Connector sealing	Rubber Plugs		